

REMARKS

Claims 44, 49, 126, 130, 136, 139, and 143 have been amended. Claims 48 and 50 have been canceled. Claims 1-43 and 51-123 were previously canceled. Claims 44-47, 49, 124-145 are currently pending in this application.

Claims 126, 127, 130, 131, 136, 139-141, and 143-145 are objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form. Therefore, claims 126, 130, 136, 139, and 143 have been rewritten in independent form to include all the limitations of the base claim and any intervening claims. Claims 127, 131, 140-141, and 144-145 depend from respective rewritten independent claims and are also in a condition for allowance. Accordingly, withdrawal of this objection is respectfully requested.

Claims 44-50, 124, 125, 128, 129, 132-135, 137, 138, and 142 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Moore et al., US Publication No. 2002/0127886 (Moore). This rejection is respectfully traversed.

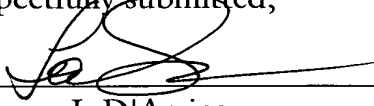
The present invention generally makes use of a material layer to reduce agglomerations of dopant material or minimize protrusions on the surface of an electrode. Claims 44-47, 49, 124, 125, 128, 129, 132-135, 137, 138, and 142 are product-by-process claims. Contrary to the Examiner's assertion, these claims contain limitations that distinguish the final structure from that of the prior art. Amended independent claim 44 recites an "integrated circuit device" prepared by a process comprising, *inter alia*, "forming a third layer over the second layer, wherein the third layer has an rms surface roughness of less than about 140 Å." Amended independent claim 49 recites an "integrated circuit device" prepared by a process comprising, *inter alia*, "irradiating the metal layer through the barrier layer to diffuse the metal layer into the chalcogenide layer to create a metal doped chalcogenide layer, wherein the presence of the barrier layer affects a structure of a surface of the metal doped chalcogenide layer."

Moore does not disclose the above noted limitations. Instead, Moore discloses a chalcogenide glass layer doped with silver and sandwiched between electrodes and an insulating layer. Moore discloses forming the structure by forming a metal layer over a chalcogenide glass layer, and irradiating the layers to diffuse metal ions into the chalcogenide glass layer. Moore at 2, paragraph [0024]. Moore, however, is silent about "a third layer" having "an rms surface roughness of less than about 140 Å," as recited by amended independent claim 44. Additionally, Moore is silent about "irradiating the metal layer through the barrier layer to diffuse the metal layer into the chalcogenide layer to create a metal doped chalcogenide layer, wherein the presence of the barrier layer affects a structure of a surface of the metal doped chalcogenide layer," as recited by amended independent claim 49. Accordingly, the structure disclosed by Moore is distinguishable from the claimed structure. For at least these reasons, withdrawal of this rejection is respectfully requested.

In view of the above amendment, applicant believes the pending application is in a condition for allowance.

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Respectfully submitted,

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